Measurement of blood lactate levels during cardiopulmonary bypass pomp in patients undergoing Coronary Artry Bypass Graft opration with Mean Artial Pressure between 50-70 mmhg

Abstract

Background and objective : Continuous blood flow during CPB causes low blood circulation and tissue hypoperfusion. Blood lactate is a good indicator of the adequacy of oxygen supply. For this purpose, lactate level monitoring during cardiopulmonary bypass should be provided with accurate information on tissue perfusion during cardiopulmonary bypass. The purpose of this study was to measure the level of lactate in the blood during cardiopulmonary bypass to determine the adequacy of the pump and the cardiac output.

Methods: In this cross-sectional, analytical and randomized study, 30 patients underwent CABG. The demographic data were collected from patients including age and sex. Then, for each patient, the data were recorded and during the operation, a blood sample of 3 ml At the beginning and the end of the pump and then the pump when entering the ICU was prepared to measure blood lactate levels. The time of pump and Map, pH, Pao2 and Paco2 was measured during the pump.

Results: 18 patients (60%) were female and 12 patients (40%) were male. The mean age of the patients was 60/73+/-12/08 years with a range of 34-83 years. Blood lactate levels increased during CPB and had a significant relationship with cardiac output, pump time and mean artrial pressure, but no significant correlation was found between pH, Pao2 and Paco2.

Conclusion: Blood lactate monitoring in patients undergoing CABG during Cpb has high sensitivity and specificity to determine the adequacy of the pump and the rate of cardiac output. Further studies are proposed in a wider range of sample sizes and a wider range of patients in operations Follow up of different surgeries.

Key words: Cardio-pulmonary bypass, coronary artery bypass graft surgery